

### Amendments to the Claims

The listing of claims will replace all prior versions and listing of claims in the application:

#### Listing of Claims:

- 5 Claim 1 (currently amended): A compound represented by the structural formula:

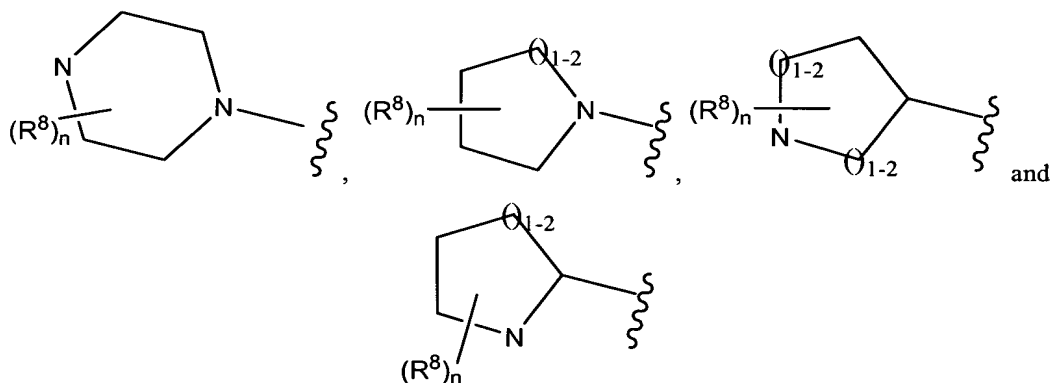


Formula III

or a pharmaceutically acceptable salt or solvate thereof.

- 10 wherein:

R is selected from the group consisting of H, halogen, aryl, heteroaryl, cycloalkyl, arylalkyl, heterocyclyl, heterocyclylalkyl, alkenyl, alkynyl, -C(O)R⁷,



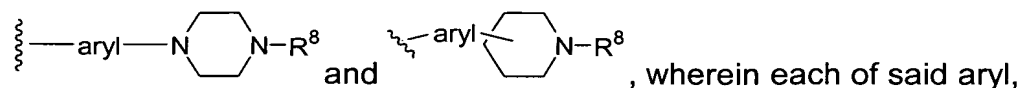
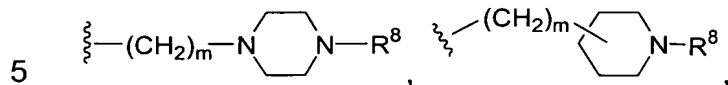
- 15

wherein each of said aryl, heteroaryl, cycloalkyl, arylalkyl, alkenyl, heterocyclyl and the heterocyclyl moieties whose structures are shown immediately above for R can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being

- 20 independently selected from the group consisting of halogen, alkyl, cycloalkyl, CF₃, CN, -OCF₃, -OR⁶, -C(O)R⁷, -NR⁵R⁶, -C(O₂)R⁶, -C(O)NR⁵R⁶, -(CHR⁵)ₙOR⁶, -SR⁶, -S(O₂)R⁷, -S(O₂)NR⁵R⁶, -N(R⁵)S(O₂)R⁷, -N(R⁵)C(O)R⁷ and -N(R⁵)C(O)NR⁵R⁶;

R¹ is H, halogen or alkyl;

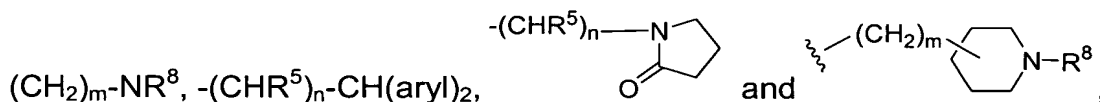
$R^2$  is selected from the group consisting of halogen,  $R^9$ , alkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, heterocyclyl, alkenyl, alkynyl, cycloalkyl,  $-\text{CF}_3$ ,  $-\text{C}(\text{O})\text{R}^7$ , alkyl substituted with 1-6  $R^9$  groups which groups can be the same or different with each  $R^9$  being independently selected,



wherein each of said aryl, heteroaryl, arylalkyl and heterocyclyl can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group

10 consisting of halogen, alkyl, cycloalkyl,  $\text{CF}_3$ ,  $\text{CN}$ ,  $-\text{OCF}_3$ ,  $-\text{OR}^6$ ,  $-\text{C}(\text{O})\text{R}^7$ ,  $-\text{NR}^5\text{R}^6$ ,  $-\text{C}(\text{O}_2)\text{R}^6$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ ,  $-\text{SR}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{N}(\text{R}^5)\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^7$  and  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{NR}^5\text{R}^6$ ;

15  $R^3$  is selected from the group consisting of H, aryl, heteroaryl, heterocyclyl,  $-(\text{CHR}^5)_n\text{-aryl}$ ,  $-(\text{CHR}^5)_n\text{-heteroaryl}$ ,  $-(\text{CHR}^5)_n\text{-OR}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^6$ ,  $-\text{C}(\text{O})\text{R}^6$ ,  $-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{C}(\text{O})\text{OR}^6$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ , cycloalkyl,  $-\text{CH}(\text{aryl})_2$ ,  $-(\text{CHR}^5)_n\text{-N}$



wherein each of said aryl, heteroaryl and heterocyclyl can be substituted or optionally substituted with one or more moieties which can be the same or

20 different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl,  $\text{CF}_3$ ,  $\text{CN}$ ,  $-\text{OCF}_3$ ,  $-\text{OR}^5$ ,  $-\text{NR}^5\text{R}^6$ ,  $-\text{C}(\text{O}_2)\text{R}^5$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ ,  $-\text{SR}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^6$ ,  $-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{N}(\text{R}^5)\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^7$  and  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{NR}^5\text{R}^6$ ;

$R^5$  is H or alkyl;

25  $R^6$  is selected from the group consisting of H, alkyl, aryl, heteroaryl, arylalkyl and heteroarylalkyl, wherein each of said alkyl, heteroarylalkyl, aryl, heteroaryl and arylalkyl can be unsubstituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl,  $\text{CF}_3$ ,  $\text{OCF}_3$ ,  $\text{CN}$ ,  $-\text{OR}^5$ ,  $-\text{NR}^5\text{R}^6$ ,  $-\text{CH}_2\text{OR}^5$ ,  $-\text{C}(\text{O}_2)\text{R}^5$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ ,

30

$-\text{SR}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{N}(\text{R}^5)\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^7$  and  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{NR}^5\text{R}^6$ ;

$\text{R}^7$  is selected from the group consisting of alkyl, aryl, heteroaryl, arylalkyl and heteroarylalkyl, wherein each of said alkyl, heteroarylalkyl, aryl, heteroaryl and arylalkyl can be unsubstituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl,  $\text{CF}_3$ ,  $\text{OCF}_3$ ,  $\text{CN}$ ,  $-\text{OR}^5$ ,  $-\text{NR}^5\text{R}^6$ ,  $-\text{CH}_2\text{OR}^5$ ,  $-\text{C}(\text{O}_2)\text{R}^5$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ ,  $-\text{SR}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^7$ ,

$-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{N}(\text{R}^5)\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^7$  and  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{NR}^5\text{R}^6$ ;

$\text{R}^8$  is selected from the group consisting of  $\text{R}^6$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ ,  $-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{C}(\text{O})\text{R}^7$ ,  $-\text{C}(\text{O}_2)\text{R}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^7$  and  $-(\text{CH}_2)\text{-aryl}$ ;

$\text{R}^9$  is selected from the group consisting of halogen,  $\text{CN}$ ,  $\text{NR}^5\text{R}^6$ ,  $-\text{C}(\text{O}_2)\text{R}^6$ ,  $-\text{C}(\text{O})\text{NR}^5\text{R}^6$ ,  $-\text{OR}^6$ ,  $-\text{C}(\text{O})\text{R}^7$ ,  $-\text{SR}^6$ ,  $-\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{S}(\text{O}_2)\text{NR}^5\text{R}^6$ ,  $-\text{N}(\text{R}^5)\text{S}(\text{O}_2)\text{R}^7$ ,  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{R}^7$  and  $-\text{N}(\text{R}^5)\text{C}(\text{O})\text{NR}^5\text{R}^6$ ;

$m$  is 0 to 4;

$n$  is 1-4; and

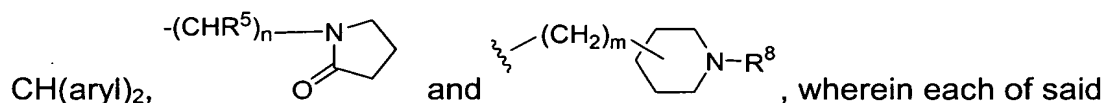
$p$  is 0-3.

Claim 2 (original): The compound of claim 1, wherein  $\text{R}$  is selected from the group consisting of  $\text{H}$ , halogen, aryl, heteroaryl, alkenyl and  $-\text{C}(\text{O})\text{R}^7$ , wherein each of said aryl and heteroaryl can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl,  $\text{CF}_3$ ,  $\text{CN}$ ,  $-\text{OCF}_3$ , and  $-\text{OR}^6$ ;

$\text{R}^1$  is  $\text{H}$  or lower alkyl;

$\text{R}^2$  is selected from the group consisting of halogen, alkyl, aryl, heteroaryl, alkenyl and  $-\text{C}(\text{O})\text{R}^7$ , wherein each of said alkyl, aryl and heteroaryl can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl,  $\text{CF}_3$ ,  $\text{CN}$ ,  $-\text{OCF}_3$ , and  $-\text{OR}^6$ ;

$\text{R}^3$  is selected from the group consisting of  $\text{H}$ , aryl, heteroaryl,  $-(\text{CHR}^5)_n\text{-aryl}$ ,  $-(\text{CHR}^5)_n\text{-heteroaryl}$ ,  $-(\text{CHR}^5)_n\text{-OR}^6$ ,  $-\text{C}(\text{O})\text{R}^6$ , cycloalkyl, -



aryl and heteroaryl can be substituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl,  $\text{CF}_3$ ,

5 CN,  $-\text{C}(\text{O}_2)\text{R}^5$  and  $-\text{S}(\text{O}_2)\text{R}^6$ ;

$\text{R}^5$  is H or lower alkyl;

m is 0 to 2; and

n is 1 or 2.

Claim 3: (Withdrawn by the Examiner as non-elected invention).

10 Claim 4: (Withdrawn by the Examiner as non-elected invention).

Claim 5 (original): The compound of claim 2, wherein R is phenyl substituted with one or more moieties selected from the group consisting of F, Cl, Br and  $\text{OCF}_3$ .

15 Claim 6 (original): The compound of claim 2, wherein  $\text{R}^2$  is F, Cl, Br, I, methyl, ethenyl, or  $-\text{C}(\text{CH}_3)_2\text{-OH}$ .

Claim 7 (original): The compound of claim 6, wherein  $\text{R}^2$  is Br, I or methyl.

20 Claim 8 (original): The compound of claim 2, wherein  $\text{R}^3$  is H, 2-ylpropanol, phenyl, benzyl, (pyrid-2-yl)methyl, (pyrid-3-yl)methyl, (pyrid-4-yl)methyl, 2-[(pyrid-3-yl)]ethyl and 2-[(pyrid-4-yl)]ethyl wherein each of said phenyl (including phenyl of said benzyl) and pyridyl can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of F, Cl, Br,  $\text{CF}_3$ , lower alkyl,  $-\text{S}(\text{O}_2)\text{CH}_3$ , methoxy and CN.

Claim 9: (withdrawn by the Examiner as non-elected invention).

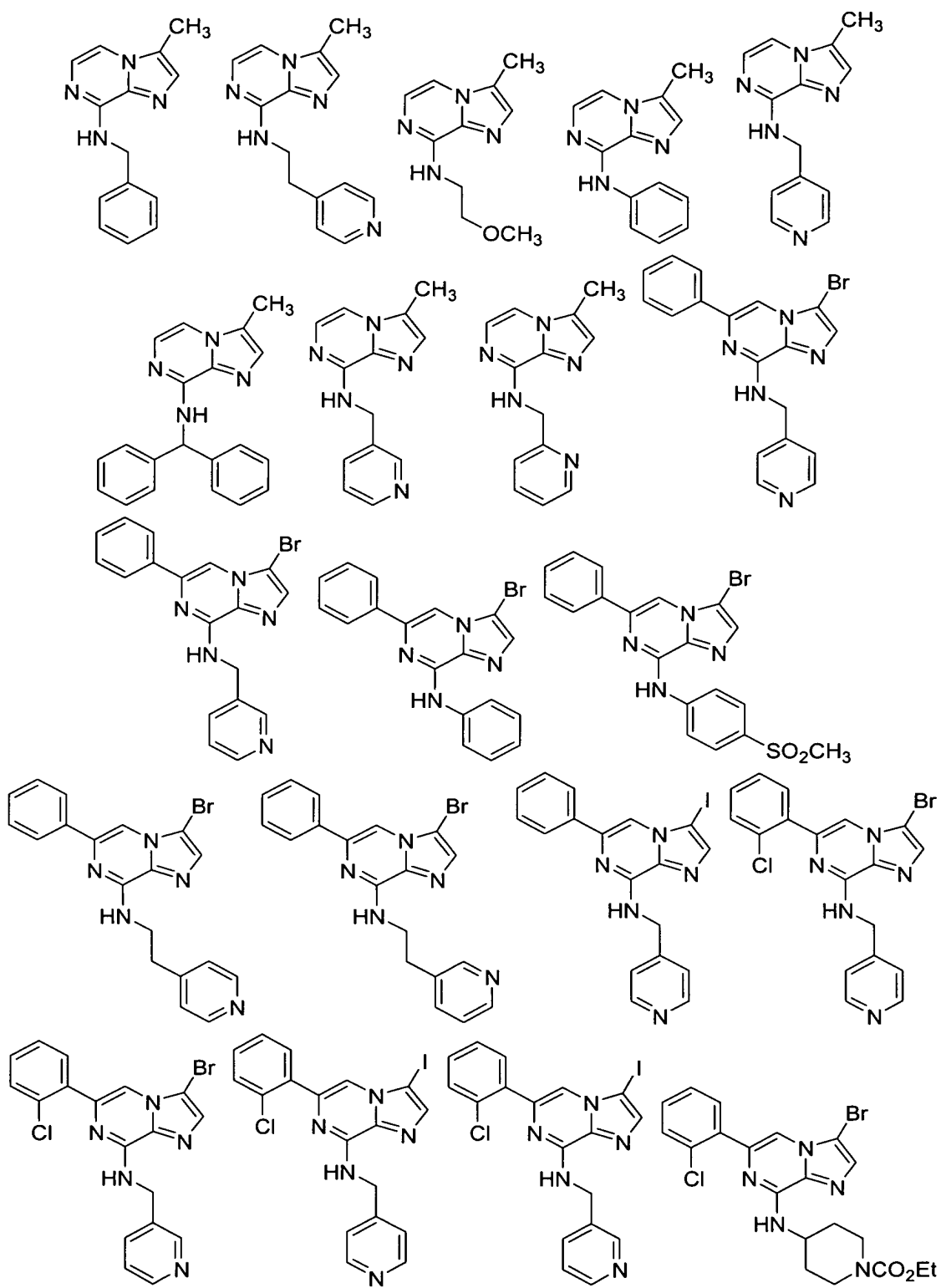
25 Claim 10 (original): The compound of claim 8, wherein  $\text{R}^3$  is (pyrid-2-yl)methyl.

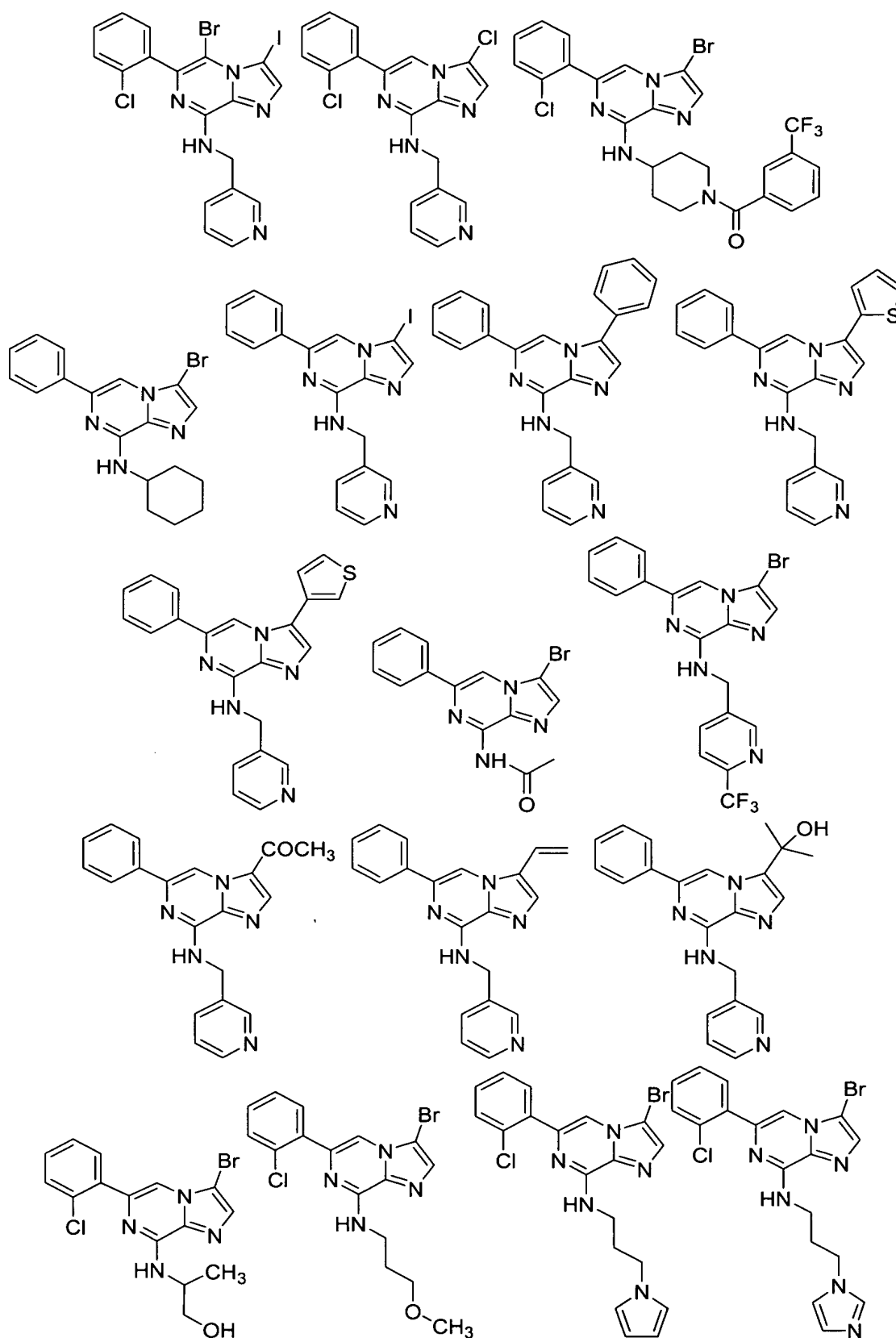
Claim 11 (original): The compound of claim 8, wherein  $\text{R}^3$  is (pyrid-3-yl)methyl.

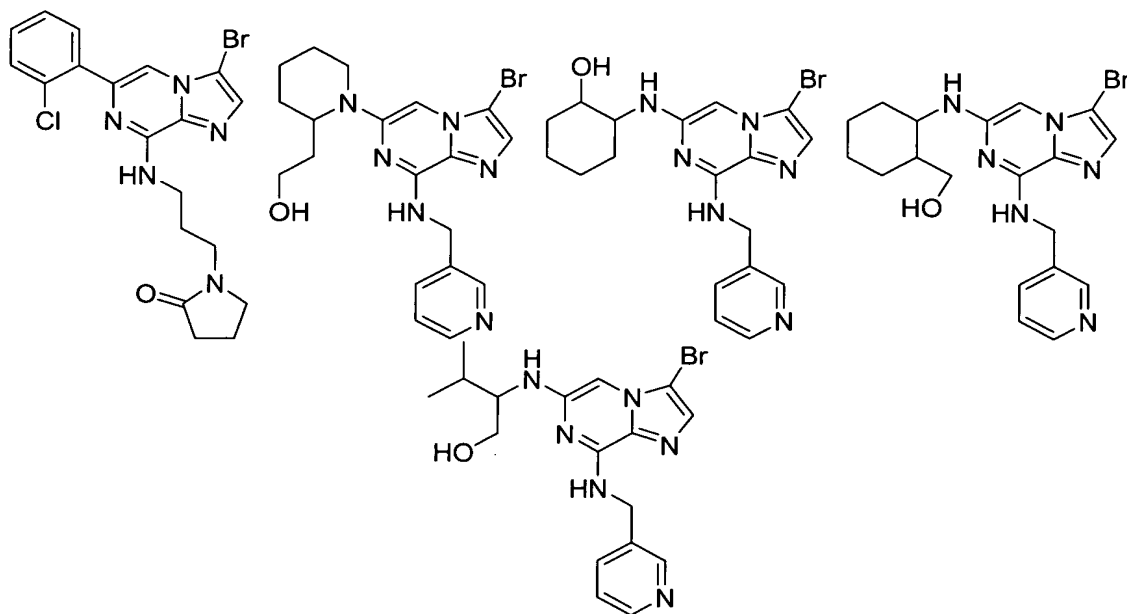
30 Claim 12 (original): The compound of claim 8, wherein  $\text{R}^3$  is (pyrid-4-yl)methyl.

Claims 13-16: (withdrawn by the Examiner as non-elected invention).

Claim 17 (original): A compound of the formula:

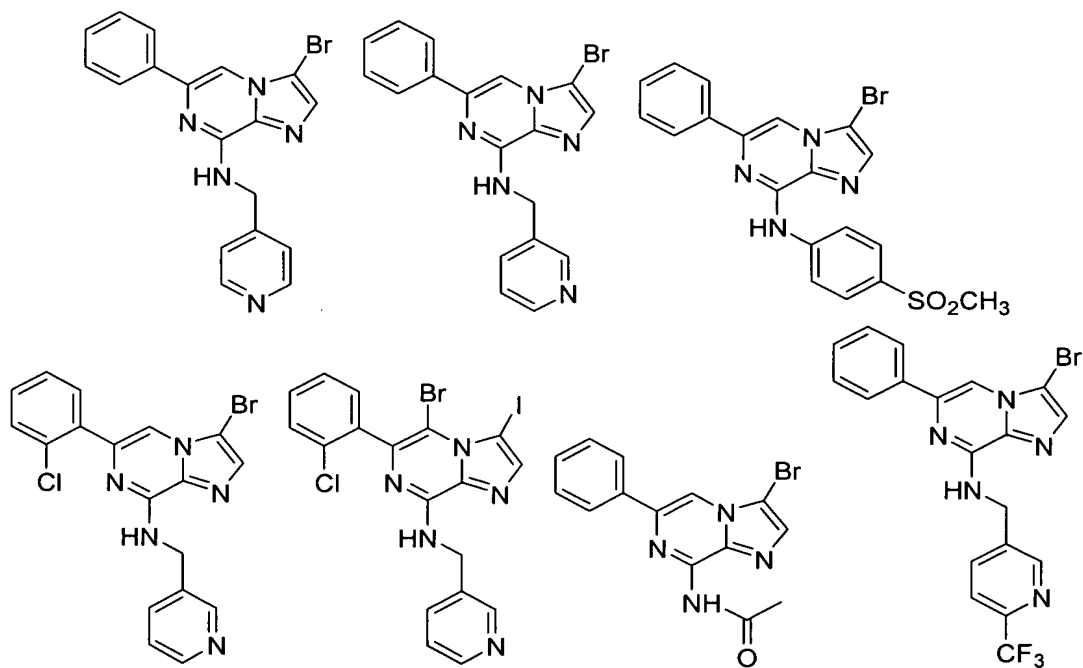


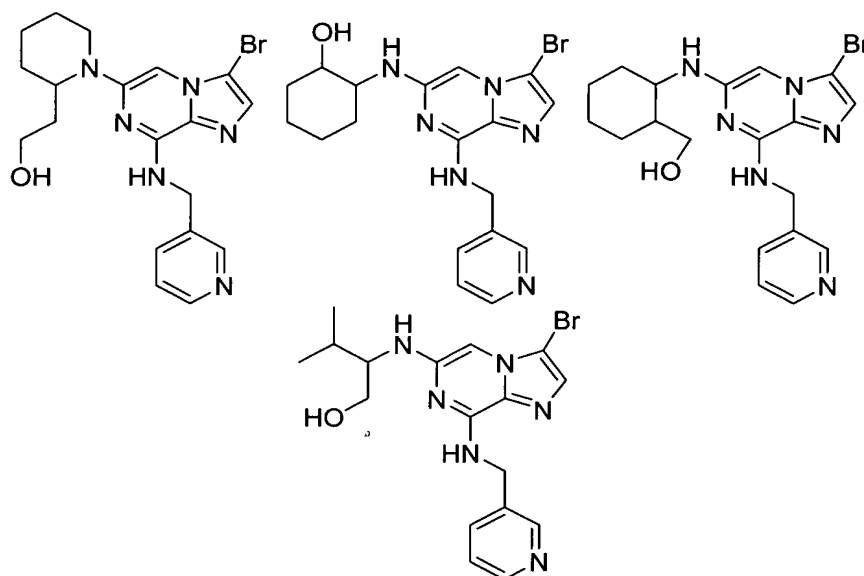




5 or a pharmaceutically acceptable salt or solvate thereof.

Claim 18 (original): A compound of the formula:





or a pharmaceutically acceptable salt or solvate thereof.

- 5 Claim 19 (currently amended): A method of inhibiting ~~one or more cyclin dependent kinases~~ cyclin dependent kinase ("CDK2"), comprising administering a therapeutically effective amount of at least one compound of claim 1 to a patient in need of such inhibition.

- Claim 20 (currently amended): A method of treating one or more diseases  
10 associated with cyclin dependent kinase CDK2, comprising administering a therapeutically effective amount of at least one compound of claim 1 to a patient in need of such treatment.

Claims 21-23: (cancelled without prejudice).

- Claim 24 (original): The method of claim 20, wherein said disease is selected  
15 from the group consisting of:

cancer of the bladder, breast, colon, kidney, liver, lung, small cell lung cancer, esophagus, gall bladder, ovary, pancreas, stomach, cervix, thyroid, prostate, and skin, including squamous cell carcinoma;

- leukemia, acute lymphocytic leukemia, acute lymphoblastic leukemia,  
20 B-cell lymphoma, T- cell lymphoma, Hodgkins lymphoma, non-Hodgkins lymphoma, hairy cell lymphoma and Burkett's lymphoma;

acute and chronic myelogenous leukemia, myelodysplastic syndrome and promyelocytic leukemia;

fibrosarcoma, rhabdomyosarcoma;

- 25 astrocytoma, neuroblastoma, glioma and schwannomas;



melanoma, seminoma, teratocarcinoma, osteosarcoma, xenoderoma pigmentosum, keratocanthoma, thyroid follicular cancer and Kaposi's sarcoma.

Claim 25 (currently amended): A method of treating one or more diseases

5 associated with cyclin dependent kinase CDK2, comprising administering to a mammal in need of such treatment

an amount of a first compound, which is a compound of claim 1, or a pharmaceutically acceptable salt or solvate thereof;

and

10 an amount of at least one second compound, said second compound being an anti-cancer agent;

wherein the amounts of the first compound and said second compound result in a therapeutic effect.

Claim 26 (original): The method of claim 25, further comprising radiation

15 therapy.

Claim 27 (original): The method of claim 25, wherein said anti-cancer agent is

selected from the group consisting of a cytostatic agent, cisplatin, doxorubicin, taxotere, taxol, etoposide, CPT-11, irinotecan, camptostar, topotecan,

paclitaxel, docetaxel, epothilones, tamoxifen, 5-fluorouracil, methoxtrexate,

20 5FU, temozolomide, cyclophosphamide, SCH 66336, R115777, L778,123,

BMS 214662, Iressa, Tarceva, antibodies to EGFR, Gleevec, intron, ara-C,

adriamycin, cytoxan, gemcitabine, Uracil mustard, Chlormethine, Ifosfamide,

Melphalan, Chlorambucil, Pipobroman, Triethylenemelamine,

Triethylenethiophosphoramine, Busulfan, Carmustine, Lomustine,

25 Streptozocin, Dacarbazine, Floxuridine, Cytarabine, 6-Mercaptopurine,

6-Thioguanine, Fludarabine phosphate, oxaliplatin, leucovirin, ELOXATIN™,

Pentostatine, Vinblastine, Vincristine, Vindesine, Bleomycin, Dactinomycin,

Daunorubicin, Doxorubicin, Epirubicin, Idarubicin, Mithramycin,

Deoxycoformycin, Mitomycin-C, L-Asparaginase, Teniposide 17 $\alpha$ -

30 Ethinylestradiol, Diethylstilbestrol, Testosterone, Prednisone,

Fluoxymesterone, Dromostanolone propionate, Testolactone,

Megestrolacetate, Methylprednisolone, Methyltestosterone, Prednisolone,

Triamcinolone, Chlorotrianisene, Hydroxyprogesterone, Aminoglutethimide,

Estramustine, Medroxyprogesteroneacetate, Leuprolide, Flutamide, Toremifene, goserelin, Cisplatin, Carboplatin, Hydroxyurea, Amsacrine, Procarbazine, Mitotane, Mitoxantrone, Levamisole, Navelbene, CPT-11, Anastrozole, Letrazole, Capecitabine, Reloxafine, Droloxafine, or  
 5 Hexamethylmelamine.

Claim 28 (original): A pharmaceutical composition comprising a therapeutically effective amount of at least one compound of claim 1 in combination with at least one pharmaceutically acceptable carrier.

Claim 29 (original): The pharmaceutical composition of claim 28, additionally  
 10 comprising one or more anti-cancer agents selected from the group consisting of a cytostatic agent, cisplatin, doxorubicin, taxotere, taxol, etoposide, CPT-11, irinotecan, camptostar, topotecan, paclitaxel, docetaxel, epothilones, tamoxifen, 5-fluorouracil, methoxtrexate, 5FU, temozolomide, cyclophosphamide, SCH 66336, R115777, L778,123, BMS 214662, Iressa,  
 15 Tarceva, antibodies to EGFR, Gleevec, intron, ara-C, adriamycin, cytoxan, gemcitabine, Uracil mustard, Chloromethine, Ifosfamide, Melphalan, Chlorambucil, Pipobroman, Triethylenemelamine, Triethylenethiophosphoramine, Busulfan, Carmustine, Lomustine, Streptozocin, Dacarbazine, Floxuridine, Cytarabine, 6-Mercaptopurine,  
 20 6-Thioguanine, Fludarabine phosphate, Pentostatine, Vinblastine, Vincristine, Vindesine, Bleomycin, Dactinomycin, Daunorubicin, Doxorubicin, Epirubicin, Idarubicin, Mithramycin, Deoxycoformycin, Mitomycin-C, L-Asparaginase, Teniposide 17 $\alpha$ -Ethinylestradiol, Diethylstilbestrol, Testosterone, Prednisone, Fluoxymesterone, Dromostanolone propionate, Testolactone,  
 25 Megestrolacetate, Methylprednisolone, Methyltestosterone, Prednisolone, Triamcinolone, Chlorotrianisene, Hydroxyprogesterone, Aminoglutethimide, Estramustine, Medroxyprogesteroneacetate, Leuprolide, Flutamide, Toremifene, goserelin, Cisplatin, Carboplatin, Hydroxyurea, Amsacrine, Procarbazine, Mitotane, Mitoxantrone, Levamisole, Navelbene, CPT-11,  
 30 Anastrozole, Letrazole, Capecitabine, Reloxafine, Droloxafine, or Hexamethylmelamine.

Claim 30: (Cancelled without prejudice).